

ABSTRACT OF THE DISCLOSURE

Disclosed is a scanning exposure apparatus in which laser light from an excimer laser is used and in which a reticle is illuminated by an illumination optical system with use of slit-like light. A pattern of the reticle is projected onto a substrate through a projection optical system. The reticle and the substrate are relatively and scaningly moved relative to a widthwise direction of the slit shape. The illumination optical system is arranged to scan the laser light from the excimer laser and to define a secondary light source on a pupil plane of the illumination optical system. When the width of the illumination region is W (mm), the scan speed of the original and/or the substrate is V (mm/sec), and the time necessary for defining the secondary light source once is T (sec), a relation $W/V = nT$ is satisfied, where n is an integer. This assures uniform projection of the reticle pattern on the substrate, through the scan exposure.